CLASSIFICATION

CENTRAL INTELLIGENCE AGENCY INFORMATION FROM FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT CD NO.

50X1-HUM

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COUNTRY

.USSR

Economic; Technological - Coal-mining

machinery

HOW **PUBLISHED**

SUBJECT

Monthly periodical

REPORT NO.

DATE OF INFORMATION

1950

WHERE

PUBLISHED

Moscow

NO. OF PAGES

DATE

PUBLISHED

May 1950

SUPPLEMENT TO

LANGUAGE

Russian

THIS IS UNEVALUATED INFORMATION

SOURCE

Mekhanizatsiya Trudoyemkikh i Tyazhelykh Rabot, No 5, 1950.

NEW EXCAVATORS FOR OPEN PIT MINES

NEW EXCAVATOR POWERED BY TEN MOTORS

During this year the Zuyevka Machine-Molding Plant of the Ministry of Electric Power Plants will put out a series of ten RPM-2 excavators. The machines are crawler-mounted, electric-powered, weigh 42 tons, and are designed for stripping and loading operations.

A six-bucket rotary digger is affixed to the end of an arm extending 7 meters to the rear of the body. The motor which runs it is mounted to one side of the digger. The digger cuts away overburden or picks up loose coal, as the case may be, and deposits it on a conveyer belt running along the other side of the arm.

The machine can be raised 5.8 meters above the ground, enabling it to work benching as high as 7 meters. With the arm lowered, the rotor can work shallow trenches 0.6-0.8 meters below ground level. The digger arm rotates laterally with the cab as it turns on the caterpillar carriage.

A 10 meter arm projecting forward has a second conveyer belt, which picks up the material deposited by the digger-arm conveyer, and runs it off the end to a loading point. This arm, which may be raised or lowered, rotates laterally on its own base.

It was found on coal-loading tests that the average productivity of the RPM-2 is 154 cubic meters per hour; its maximum productivity, 206 cubic meters per hour. The machine moves at a speed of 0.5 kilometers per hour.

A drum at the rear of the machine winds and unwinds the cable which supplies power to the ten electric motors serving the various units. The motors and their functions are as follows:

Unit Driven	Motor Type	No of Motors	Capacity kw	RPM
Caterpillar tread	MA-144-2/8	2	15.0	735
Rotary digger	MA-144-1/4	1	21.5	1,470

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Unit Driven	Motor Type	No of Type	Capacity (kw)	RPM	
Winches for raising rear and forward arms	MA-144-1/8	2	·_ 11.0	730	
C.b turntable and loader arm turn- table	ADOF-52/8	2	2.6	725	
Power-cable drum	ADOF-52/8	1	2.6	725	
Both conveyer belts	ADF-42/4	2	5.8	1,445	

Simplified top and profile diagrams of the machine have been permanently delineated on the control panel (made at the Leningrad Elektropus't Flant), with the control push buttons located at points on the diagram corresponding to actual units on the machine itself. Thus, the operator may tell at a glance while buttons control the various functions of the machine.

The transmissions for the rotary digger, caterpillar treads, hoisting winches, conveyer belts, cab turntable, loading-arm turntable, and other units are standardized. As a result of this, the variety of parts has been cut 30 percent in comparison with the first variant of this machine, the RPM-1



MODIFIED EXCAVATOR MAKES TRANSPORT EASIER

On the initiative of the Ministry of the Coal Industry, some SE-3 excavators produced at the Sverdlovsk Uralmash Plant were equipped with lengthened rigs. These rigs were made at the Ministry's Karpinsk and Korkino plants on designs submitted by the chief designer of the Giprouglemash (State Institute for Planning Coal Mechinery). The 17-meter-long boom is of all-welded construction; the dipper stick, 10.5 meters long, is of timber reinforced by steel strips. Either a 2- or 3-cubic mater bucket is issued.

The first ten of these machines were put into operation in open-pit mining operations at the end of 1949. Their lengthened rig enables them to load overburden from the pit into cars situated on the benching, whereas the standard model was able only to load cars on the same level as the excavator itself. Running the cars along the benching instead of the pit saves expenditure of labor and materials in laying out, moving, and maintenance of the track. The modified excavators may also be used in digging irrigation ditches.

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